

TM 5-6115-631-14&P

TECHNICAL MANUAL

**OPERATOR, UNIT, INTERMEDIATE DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND
SPECIAL TOOLS LISTS)**

**POWER PLANT
AN/MJQ-16 (NSN 6115-00-033-1395)
(2) MEP-002A 5 KW 60 HZ
GENERATOR SETS
M103A3 2-WHEEL, 2-TIRE,
MODIFIED TRAILER**

Approved for public release; distribution is unlimited.

This manual supersedes Chapter 13 of TM 5-6115-594-14&P dated 25 September 1984.

**HEADQUARTERS, DEPARTMENT OF THE ARMY
24 JUNE 1988**

TECHNICAL MANUAL
NO. 5-6115-631-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 24 June 1988

Operator, Unit, Intermediate Direct Support and
General Support Maintenance Manual
(Including Repair Parts and Special Tools Lists)

POWER PLANT
AN/MJQ-16 (NSN 6115-00-033-1395)
(2) MEP-002A 5 KW 60 HZ
GENERATOR SETS
M103A3 2-WHEEL, 2-TIRE
MODIFIED TRAILER

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <mpmt%/oavma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited

TABLE OF CONTENTS

	PAGE
CHAPTER 1 INTRODUCTION	
Section I General.....	1-1
Section II Description and Data.....	1-2
CHAPTER 2 OPERATING INSTRUCTIONS	
Section I Operating Procedures	2-1
Section II Operation of Auxiliary Equipment.....	2-2
Section III Operation Under Unusual Conditions.....	2-2
CHAPTER 3 OPERATOR/CREW MAINTENANCE INSTRUCTIONS	
Section I Consumable Operating and Maintenance Supplies.....	3-1
Section II Lubrication Instructions	3-1
Section III Preventive Maintenance Checks and Services (PMCS)	3-1
Section IV Troubleshooting.....	3-19
Section V Operator/Crew Maintenance Instructions.....	3-19

*This manual supersedes Chapter 13 of TM 5-6115-594-14&P dated 25 September 1984.

CHAPTER 5.	INTERMEDIATE (FIELD), DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS	
Section I.	Introduction	5-1
Section II.	Maintenance of Power Plant Trailer	5-1
Section III.	Generator Set	5-9
Section IV.	Maintenance of Electrical System	5-11
CHAPTER 6.	TEST AND INSPECTION AFTER REPAIR	
Section I.	General Requirements.	6-1
Section II.	Inspection	6-1
Section III.	Operational Tests	6-1
APPENDIX A.	REFERENCES.	A-1
APPENDIX B.	COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS	B-1
APPENDIX C.	MAINTENANCE ALLOCATION CHART.	C-1
APPENDIX D.	UNIT, INTERMEDIATE (FIELD) (DIRECT SUPPORT AND GENERAL SUPPORT) AND DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LISTS.	D-1

LIST OF ILLUSTRATIONS

Figure	Title	Page
1-1	Power Plant, Roadside Front, Three-Quarter View	1-2
1-2	Power Plant, Curbside Rear, Three-Quarter View	1-3
3-1	Fitted Cover Installed on Power Plant	3-20
3-2	Fitted Cover Rolled Up for Removal	3-21
3-3	Bow Assembly Replacement	3-22
4-1	Unpacking Power Plant	4-2
4-2	Installing Power Plant.	4-4
4-3	External Fuel Line Connection	4-6
4-4	Fuel Can Bracket Replacement	4-15
4-5	Accessory Box Replacement	4-16
4-6	Fire Extinguisher Bracket Replacement	4-17
4-7	5-Wire Switch Box Schematic Diagram	4-18
4-8	4-Wire Switch Box Schematic Diagram	4-18
4-9	Switch Box Replacement.	4-20
4-10	Load Terminal Replacement	4-22
4-11	Indicator Light and Wire Replacement	4-23
4-12	Switch to Load Terminal Wire Replacement	4-24
4-13	Power Cable Replacement	4-26
4-14	Ground Wire Replacement	4-27
4-15	Taillight Cable Assembly and Electrical Lead Repair	4-28
5-1	Leg Prop Assembly Replacement	5-2
5-2	Leg Prop Disassembly	5-3
5-3	Fender and Bed Replacement	5-5
5-4	Accessory Box Repair	5-8
5-5	Power Unit Markings.	5-9
5-6	Detaching Generator Set from Trailer	5-10
5-7	Lifting Generator Set	5-11
5-8	Switch Replacement	5-13
B-1	Components of End item	B-2
B-2	Basic Issue items.	B-3
D-1	Enclosure.	D-10
D-2	Generator Set.	D-12
D-3	Five-Wire Power Cable	D-14
D-4	Five-Wire Power Cable	D-16
D-5	Four-Wire Power Cable.	D-18
D-6	Five-Wire Switch Box	D-20
D-7	Five-Wire Switch Box	D-26
D-8	Four-Wire Switch Box	D-32
D-9	Trailer Body.	D-38
D-10	Accessory Box	D-44
D-11	Data Plates and Reflectors	D-46
D-12	Leg Prop Assembly.	D-48
D-13	Taillight Cable Assemblies and Electrical Leads	D-50

LIST OF TABLES

Number	Title	Page
3-1	Consumable Operating and Maintenance Supplies	3-1
3-2	Operator/Crew Preventive Maintenance Checks and Services (PMCS).	3-4
4-1	Unit Preventive Maintenance Checks and Services (PMCS)	4-9
4-2	Troubleshooting	4-13

CHAPTER 1

INTRODUCTION

SECTION I. GENERAL

1-1. Scope. This manual is for your use in operating and maintaining the Power Plant, AN/MJQ-16. The AN/MJQ- 16 is a mobile power plant used to supply power to any system or equipment requiring up to 5 kW of 60 Hz input operating power. In addition to operating instructions and operator, unit, and intermediate direct support and general support maintenance procedures, this manual contains a Repair Parts and Special Tools List for the power plant.

1-2. Limited Applicability. Some portions of this publication are not applicable to both services. These portions are prefixed to indicate the service to which they pertain: (A) for Army, and (F) for Air Force. Portions not prefixed are applicable to both services.

1-3. Maintenance Forms and Records.

- a. (A) Maintenance forms and records used by Army personnel are prescribed by DA Pam 738-750.
- b. (F) Maintenance forms and records used by Air Force personnel are prescribed in AFM66-1 and the applicable 00-20 Series Technical Orders.

1-4. Reporting of Errors. Reporting of errors and omissions and recommendations for improvement of this publication by the individual user is encouraged. Reports should be submitted as follows: a. (

- a. (A) ARMY - DA Form 2028 directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MT, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798..
- b. (F) Air Force - AFTO Form 22 directly to: Commander, Sacramento Air Logistics Center, ATTN: SM-ALC-MMEDTA, McAllen Air Force Base, CA, 95652-5609, in accordance with TO-00-5-1.

1-5. Reporting Equipment Improvement Recommendations (EIR). EIR's will be prepared using SF 368, Product Quality Deficiency Report. Instructions for preparing EIR's are provided in DA PAM 738-750, The Army Maintenance Management System. EIR's should be mailed directly to: Commander, US Army Aviation and Troop Support Command, ATTN: AMSAT-I-MDO, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798.

1-6. Levels of Maintenance Accomplishment.

- a. (A) Army users shall refer to the Maintenance Allocation Chart (MAC) for tasks and levels of maintenance to be performed.
- . (F) Air Force users shall accomplish maintenance at the user level consistent with their capability in accordance with policies established in AFM 66-1.

1-7. Destruction of Army Materiel. Destruction of Army materiel to prevent enemy use shall be in accordance with TM 750-244-3.

1-8. Administrative Storage.

- a. Army equipment placed in administrative storage will have preventive maintenance performed in accordance with the PMCS tables before storage. When equipment is removed from storage, PMCS will be performed to ensure operational readiness.
- b. (F) For administrative storage procedures for Air Force equipment, refer to TO 35-1-4, Processing and Inspection of Aerospace Ground Equipment for Storage and Shipment.

1-9. Preparation for Shipment and Storage.

- a. (A) Army – Refer to TB 740-97-2.
- b. (F) Air Force - Refer to TO 35-1-4 for component of end item generator sets and TO 38-1-5 for installed engine.

Section II. DESCRIPTION AND DATA

1-10. Description. Power Plant AN/MJQ-16 is made up of two Tactical Utility Generator Sets, DOD Model MEP-002A, mounted on a single modified M103A3 trailer. These generator sets are air-cooled, diesel engine-driven units, each with a load capacity of 5 KW at 60 Hz. The trailer is a two-wheeled unit with a 1-1/2-ton carrying capacity. The modifications to the basic trailer provide stowage for the accessories and all equipment necessary for mobile operation as well as providing a work platform for the operator and maintenance personnel. Output from the power plant is applied to the system or equipment being powered through a switch box. The AN/MJQ-16 is supplied with either a 4-wire or a 5-wire configuration switch box. Figures 1-1 and 1-2 illustrate the power plant with the fitted cover removed to show the generator sets.

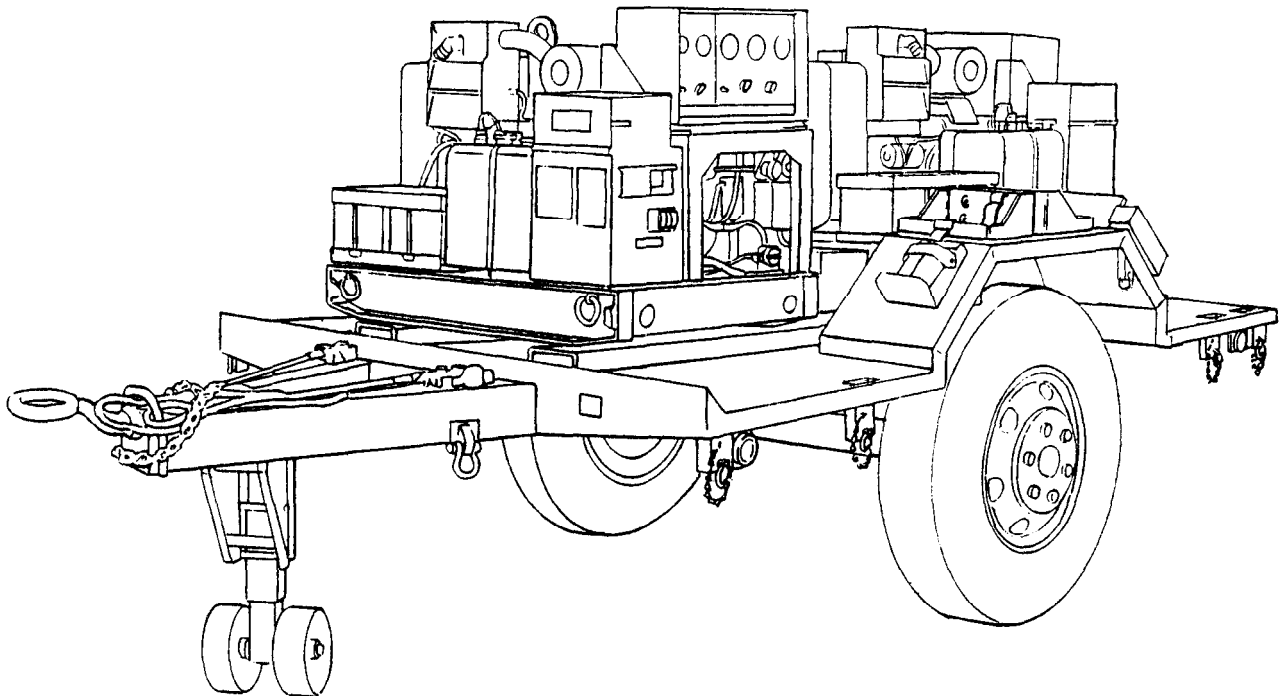


Figure 1-1. Power Plant, Roadside Front, Three-Quarter View.